

Verb placement in Basque and the theory of movement

Luis Vicente
17th June 2004

Contents

0. Abstract	1
1. Movement and structure preservation	2
2. Head-to-spec movement cross-linguistically	3
2.1 Scandinavian stylistic fronting.....	3
2.2 Participle fronting in Slavic.....	4
2.3 Remnant VP movement in Germanic.....	5
2.4 Q-movement in Japanese.....	7
3. Verb placement in Basque	8
3.1 Basic data and the complex head analysis.....	9
3.2 Some discussion.....	11
3.2.1 Theoretical issues.....	11
3.2.2 Ellipsis.....	12
3.2.3 SOAs.....	15
3.3 Interim conclusion.....	17
4. A new analysis	17
4.1 Preliminaries.....	17
4.1.2 Structure.....	17
4.1.2 On Neg(P).....	18
4.2 Basque verb placement reconsidered.....	22
4.2.1 The basics.....	22
4.2.2 Against remnant movement.....	25
4.2.3 SOAs reconsidered.....	26
4.2.4 A note on semantic inertness.....	28
4.2.5 Restrictions on fronting.....	29
4.3 Conclusion.....	31
5. The theory of movement	31
5.1 Theoretical motivation.....	32
5.2 Phrase and head movement.....	33
5.3 HMC effects.....	34
6. References	36

Abstract

Under the Bare Phrase Structure approach (Chomsky 1995), the structure preservation rules of earlier versions of generative grammar (e.g., Emonds 1970) cannot be formulated any more. This results in the possibility of moving heads to specifier positions. Far from being a problem, this option can be used to our advantage in the analysis of several phenomena in a broad range of languages. The major empirical focus is on Basque, whose intricate patterns of verb placement (involving verbs, auxiliaries, negation, and certain adverbs) find an elegant solution under this approach.

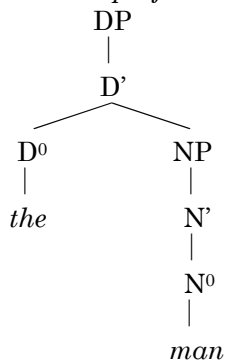
1. Movement and structure preservation

In the beginning, back in the 60s, transformations were free. The theory offered the possibility to write any transformational rule one wished, without restrictions on its complexity or in its terms (in the same way as semantic type theory can generate an infinite number of types through recursivity). This, obviously, was not an acceptable state of affairs, because many of these rules were never attested in natural language. Thus, some theoreticians turned to the task of constraining the power of the rule system, the most famous attempt being Ross (1967). Another successful study is Emonds (1970), who introduced the idea of structure preservation. He gives the following general format for rules:

- 1) *Emonds (1970:29)*
 $W - (B X) - Y - (B _) - Z \longrightarrow W - (B _) - Y - (B X) - Z$

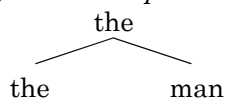
The rule moves an element X from one position to another. Crucially, both positions are marked as (B). This is the essence of structure preservation, constituents can only move into positions marked as of the same kind (i.e., NPs can only move to NP positions, verbs can only move to V positions). This idea was carried over to the GB era. In this period, construction-specific rules gave way to the general rule Move α. As a consequence, structure preservation was re-encoded in the X-bar schema, which regulated all structure building. At this point, the idea was that XPs can only appear in or move to XP positions (namely, specifiers, complements, and adjuncts), whereas X⁰s were restricted to X⁰ positions. A consequence of the reformulation was the introduction of vacuous projection, whereby a bare head could project up to the XP level without taking complements or specifiers, only to be allowed in an XP position.

- 2) *Vacuous projection in X-bar theory*



In the nineties, the situation changed again. A number of works attempted to eliminate X-bar theory. In this respect, the most influential one is Chomsky's (1995) Bare Phrase Structure hypothesis (BPS). Here, Chomsky argues that structure building is a function of merger and movement alone, with no reference to bar levels. The only important information is the one contributed by the lexical items we use. Under this approach, (2) is rendered as (3):

- (3) *A BPS representation*



However, as noted by i.a. Carnie (1996, 2000) and Toyoshima (2000, 2001), once we adopt the BPS approach, we cannot state anymore anything like a structure preservation

rule. If grammatical operations, and movement in particular, can only make reference to constituents and (sets of) features, it is not possible to talk about a certain position being reserved for heads or phrases. Notice that this is actually independent of the issue of the way in which we can define heads and phrases in BPS (i.e., as non-projecting vs. fully projected elements). If merge (and move as copy plus merge) is the only process involved in constructing structures, it makes no sense to say that a certain position is reserved for a head or a phrase, even if these notions can somehow be defined. That is, there should be no *a priori* restriction on which positions heads and phrases can appear in¹. Consequently, it should be possible to move phrases to head positions and head to specifier positions. The first option is explored by Carnie (1996, 2000), though I will not say much about it here². In this article, I focus on the second option, namely, the possibility of moving heads to specifier/adjunct positions. Far from being a problem for the theory, I show, following Toyoshima (2000, 2001) that this is a legitimate movement operation, realised in a broad range of languages.

The article is organised as follows: in section 2, I go through a number of constructions in diverse languages that are amenable to a reanalysis involving head-to-spec movement. In section 3, I turn to the main empirical domain of this study, namely, verb placement in Basque. After describing the surface patterns for verbs, auxiliaries, negation, and speaker oriented adverbs (SOAs henceforth), I show that the received analysis in terms of head-to-head incorporation not correct. In section 4, I derive the different patterns and their properties through head-to-spec movement. Finally, in section 5 I return to the motivation and the technical details of head-to-spec movement, and discuss how it interacts with other types of movement, especially with traditional head-to-head movement.

2. Head-to-spec movement cross-linguistically

If head-to-spec movement is a possible operation, we expect to find instances of it with certain frequency. In fact, Toyoshima (2000, 2001) already identified a number of constructions in which head-to-spec movement is at play. In this section, I review and extend his argumentation. The conclusion is that head-to-spec movement is a real phenomenon that must be added to inventory of syntactic operations

2.1 Scandinavian stylistic fronting

The first piece of evidence I want to discuss is stylistic fronting in Scandinavian languages, where, in the absence of a subject, a constituent is fronted to the left of the auxiliary. This is, precisely, one of its defining characteristics: unlike V2 topicalisation it may only occur if there is a null subject. Holmberg (2000) takes this property to indicate that the fronted constituent moves to SpecTP³. The examples in (4) exemplify this condition for Icelandic. Moreover, (5) shows that it can affect elements that are clearly heads, such as participles, adjectives, and particles:

¹ Of course, the interplay of other factors restricts this freedom. The point here, though, is that such restrictions are totally independent of the process of merge.

² See Svenonius (year?) for discussion.

³ His technical implementation is in terms of an EPP feature on the T⁰ head, which forces the SpecTP slot to be phonetically realised. He also takes the view that the fronted constituent may be a bare head, so his analysis and mine are quite similar.

- 4) *The subject gap condition*
- a. ✓ Honum möetti standa á sama, hvað **sagt** væri um hann
 him might stand on same what said was about him
It might be all the same to him what was said about him
- b. * Honum möetti standa á sama, hvað **sagt** hefði Hjördis um hann
 him might stand on same what said has Hjördis about him
It might be all the same to him what Hjördis had said about him
- 5) *It may apply to heads:*
- a. ✓ Þeir vissu, hver **genginn** væri
 they knew who gone was
They knew who had gone
- b. ✓ Engum datt i hug, að **vert** væri að reyna til að kynnast honum
 nobody fell to mind that worth was to try P to know him
It didn't occur to anybody that it was worth trying to get to know him
- c. ✓ Þa gætti enginn sagt, með vissu, að **svo** hefði verið
 then could nobody say with certainty that so had been
Then, nobody could say with certainty that it had been that way

Note that these examples, and especially (4a) and (5a), cannot be derived as involving remnant VP movement. As is well-known, object shift in Scandinavian is only possible if the verb itself has moved as well (Holmberg's Generalisation, exemplified below for Swedish). In the presence of an auxiliary, object movement out of VP is impossible:

- 6) *Holmberg's generalisation*
- a. ✓ Jag har inte [VP kysst **henne**]
 I have not kissed her
- b. * Jag har **henne** inte [VP kysst *t*]
 I have her not kissed

Since stylistic fronting, by definition, involves an auxiliary, it follows that examples like (4a) cannot be instances of remnant VP movement, since the object cannot possibly have left VP. Therefore, the only option left is that the participle alone (a head) moves into the SpecTP position

2.3 Remnant VP movement in Germanic

A similar reasoning as above holds for incomplete category fronting in Germanic. Ever since den Besten & Webelhuth's (1987) influential analysis, German examples in (7) is usually taken to involve remnant VP movement. The derivation is quite straightforward: first we scramble the object out of VP, and then we front the VP, containing the verb and the trace of the object (8).

- 7) Geküsst hat Jan das Mädchen
 kissed has Jan the girl
Jan has kissed the girl

- 8) *Derivation*
- a. Base structure
 [VP O V]
- b. Object movement out of VP
 [XP O [VP *t* V]]
- c. Fronting of the remnant VP
 [CP [VP *t* V].....[XP O [*t*]]

This analysis has gone through the years pretty much unquestioned, especially because of its elegance and the lack of an obvious alternative. However, this is not to say it is unproblematic. As a matter of fact, Fanselow (2001) argues that it is actually untenable. His main argument is that it is not always possible to trigger movement out of VP of all elements but the verb (step 8b). There are elements such as *niemanden* “nobody” (9), or predicative APs (10) that cannot be scrambled out of VP, but that can be stranded under participle fronting⁴. This is surprising, because it amounts to saying that these elements move out of VP just in these particular cases, a clearly *ad hoc* mechanism:

- 9) a. ✓ ... dass der Fritz niemanden küsst
 that the Fritz nobody kisses
 ... *that Fritz kisses nobody*
 b. ?*... dass niemanden der Fritz küsst
 that nobody the Fritz kisses
 c. ✓ Geküsst hat der Fritz niemanden
 kissed has the Fritz nobody
- 10) a. ✓ ... dass er das Haus rot anmalte
 that he the house red painted
 ... *that he painted the house red*
 b. ?*... dass er rot das Haus anmalte
 that he red the house painted
 c. ✓ Angemalthat er sein Haus rot
 painted has he his house red

The problem, quite obviously, is the assumption that the only maximal projections – namely, VP- can appear in the SpecCP position. If we drop this assumption and accept that bare heads can move to a specifier position, the paradigm above does not present any special problems. We simply need to move the verb *-geküsst* in (9) and *angemalt* in (10)-without affecting any of the surrounding items. Of course, this does not prevent of scrambling the object, in case it is possible to scramble it. The crucial point is that this analysis does not force scrambling across the board, thus avoiding the problems raised by (9) and (10)⁵.

2.3 Participle fronting in Slavic

Another obvious candidate for reanalysis, I believe, is participle fronting in Slavic languages, as described by Rivero (**references?**). In Slavic (and in some Old Romance languages), it is possible to front a participle to the left of the auxiliary. However, unlike in Germanic, it is not possible to front a full VP⁶. Consequently, an analysis in terms of remnant VP movement as in Germanic (den Besten & Webelhuth 1987) is not plausible. Mainly because of this reason, Rivero proposes that the participle undergoes V-to-C movement, skipping over T⁰:

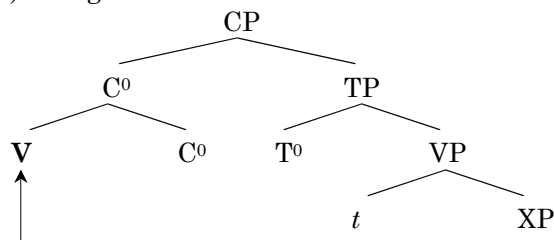
⁴ Similar problem arise if one assumes that VP is emptied not by scrambling but by (string vacuous) extraposition. See Fanselow’s article for full details.

⁵ Of course, since other kinds of elements may scramble out of VP, it is still possible to retain the remnant movement analysis for some cases. The point here, though, is that there are cases where this is not an option, an one has to resort to spec-to-head movement.

⁶ Though in some languages, such as Romanian, VP fronting is possible. However, those auxiliaries that allow for VP fronting do not allow for participle fronting of the type in (11), and vice versa. For the purposes of this section, though, we can adopt the generalisation that VP fronting is banned across the board.

- 11) a. ✓Petur e procel knjigata
 Petur has read book
Petur has read the book
 b. ✓Procel e pro knjigata
 read has book
 c. * [Procel knjigata] (Petur) e
 read book Petur has

12) *Long Head Movement*



Leaving aside the technical details of how to circumvent the HMC, there are two main problems with Rivero's analysis. The first one is that she predicts that participle fronting should be unavailable in embedded contexts, since the C⁰ position is already occupied by the complementiser, leaving the participle without a landing site. However, her generalisation does not seem to be correct. Cavar & Wilder (1994), Embick & Izvorski (1995), Lambova (2003) and Broekhuis & Migdalski (2003) give examples of participle fronting in embedded clauses, such as the following:

- 13) a. ✓Rasbrah ce procel bese knjigata
 understand that read be book
I understood that you had read the book
 b. ✓Dekata kazvak ce gledali sa filma
 kids say that watched be film
The kids say that they have watched the film

The second problem is that it is a mystery why the fronted participle and the auxiliary should be adjacent. If they occupy the C⁰ and T⁰ positions respectively, we would expect that whatever may appear in SpecTP could intervene between them. However, this is not possible

- 14) * Procel Petur e knjigata
 read Petur has book
Petur has read the book

Due to these problems, alternative analyses have arisen. For instance, Cavar & Wilder (1994) and Boskovic (**reference?**) argue that the participle adjoins to the auxiliary in T⁰. However, Broekhuis & Migdalski (2003) claim that this alternative predicts wrongly that nothing should intervene between the participle and the auxiliary when, in fact, clitics may break the strict adjacency:

- 15) ✓ Dal li mu go e
 given Q him him be
Has he given it to him?

To solve this problem, Broekhuis & Migdalski propose that the participle lands in SpecTP⁷. This analysis has the advantage of accounting for the two problems noted above. Moreover, it also predicts that, if there is an overt subject, it will follow the participle-auxiliary string (as in 16, Bulgarian, from Cavar & Wilder 1994). Since the participle is sitting in SpecTP, overt subjects must stay in their VP-internal positions:

- 16) ✓ Procel e Petur knigata
 read has Petur book
Petur has read the book

Now, Broekhuis & Migdalski argue for a remnant VP movement analysis. As we saw earlier, this analysis is implausible because Slavic seems to lack the two prerequisites for remnant VP movement: first, independently attested VP fronting, and second, a plausible movement operation capable of emptying the VP of everything but the verb. We can, however, maintain the advantages of their analysis while avoiding this problem if we allow the participle to undergo head-to-spec movement. Therefore, we have identified another context in which it is plausible to assume this operation.

2.4 Q-movement in Japanese

In his discussion of Japanese dialect and Sinhala questions, Hagstrom (1998) claims that the Q morpheme undergoes movement from a clause internal position to the CP layer. The most straightforward test for movement, namely, island violations, needs to be constructed carefully, because, Hagstrom argues, the Q morpheme can be generated right outside the island, instead of inside it, thus avoiding the island effect. In Japanese, one way to pinpoint the base position of the Q morpheme is to use the emphatic marker *ittai*, which always c-commands the launching site. Consider the examples below:

- 17) a. ✓ John-wa **ittai** kinoo honya-de **nani-o** kaimasita **ka**?
 John.TOP EMPH yesterday bookstore.LOC what.ACC bought Q
What on earth did John buy in the bookstore yesterday?
 b. * Mary-wa [John-ni **ittai nani-o** ageta hito-ni] atta **no**?
 Mary.TOP John.DAT EMPH what.ACC gave man.DAT met Q
Mary met the man that gave what (on earth) to John?

In (17b), the Q morpheme *no* is generated within a complex NP island, as indicated by the position of *ittai*. Therefore, movement out of that island is banned. On the other hand, in (17a), no island intervenes as movement is legitimate. Moreover, on top of islands, we can also witness intervention effects in Q movement. Hagstrom (citing Miyagawa's class lectures) makes the generalisation that an element such as the NPI *-sika* "only" cannot intervene (structurally) between the wh- word and the Q morpheme:

- 18) a. ?* Taroo-**sika nani-o** yoma-nai **no**?
 Taroo-only what.ACC read.NEG Q
What did only Taro read?
 b. ✓ **Nani-o_i** Taroo-**sika** *t_i* yoma-nai **no**?
 what.ACC Taroo-only read.NEG Q
What did only Taro read?

⁷ Though in the case of (15) the participle presumably surfaces in SpecCP, given that *li* is usually taken to be an instantiation of the C⁰ head. This does not affect the argumentation, though, since it might have landed first in SpecTP, for whatever reasons force that movement in *li*-less clauses –see below-, and then moved further to SpecCP. As we shall see, this is a process similar to what we find in Basque in sentences involving certain speaker oriented adverbs.

- c. ✓ **Dare-ga** LGB-**sika** yoma-nai **no**?
 who.NOM LGB-only read.NEG Q
Who reads only LGB?

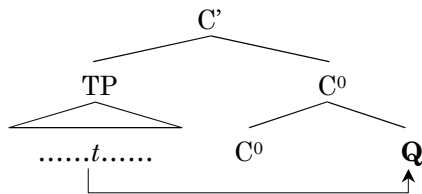
In (18a), the NPI *-sika* “only” intervenes between the *wh-* word and the Q morpheme, therefore, ungrammaticality results, in accordance to the Miyagawa-Hagstrom generalisation. In (18b), on the other hand, the *wh-* word has been scrambled out of the c-command domain of *-sika*, therefore no intervention effect arises. Finally, in (18c), the *wh-* word is the subject, and therefore never in the c-command domain of the *-sika* adjoined to the object. Hence, no intervention effect either. In all these cases, Hagstrom assumes that the Q morpheme *no* and the *wh-* word form a constituent. At some point, though, *no* has to raise to the CP layer, stranding the *wh-* word, to function as a scope marker. As a consequence, these intervention effects can be analysed in terms of movement, in a manner parallel to those described in German by Beck (1996).

Having argued that the Q morpheme undergoes movement, Hagstrom adds:

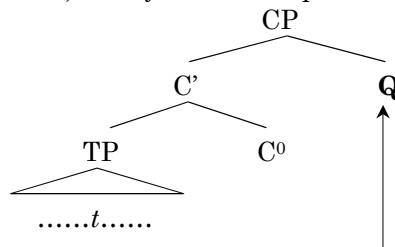
“...in the languages we have been looking at, the question particle looks like a syntactic *head* [...] [they] seem to be travelling over quite long distances. If true, this is in direct conflict with the Head Movement Constraint (HMC) [...] I will take the view here that the HMC does not in fact constraint Q movement [...] If a feature F is being attracted, and a head H carries the feature, movement of H will only be blocked if there is an intervening head which also carries F. Any head that does not carry this feature is irrelevant.”

That is, Hagstrom proposes long head movement of the Q morpheme to the C⁰ head. However, this analysis can be also be reformulated in my terms, by saying that the Q morpheme actually lands in SpecCP. Both analyses are sketched below.

19) *Movement to C⁰*



xx) *Adjunction to SpecCP*



This alternative is plausible because, in the first place, it does not interfere –as far as I can see– with Hagstrom’s syntax and semantics for these sentences. Moreover, it allows for successive cyclic movement of the Q morpheme in a trivial way (e.g., by the same mechanism in which regular *wh-* phrases move in other languages), whereas Hagstrom would be forced to postulate excorporation of Q from the lower C, immediately followed by incorporation into the upper one. Evidently, more research is needed on this topic but, on a first approximation, we can see that head-to-spec movement is a possible way of dealing with these sentences.

3. Verb placement in Basque

Verb movement is one of the classical topics in Basque syntax. The placement of auxiliaries, participles, negation, and speaker oriented adverbs (henceforth SOAs) forms intricate patterns that have attracted much attention. As we shall see later on, though, the

usual analysis of these patterns as head-to-head incorporation is inadequate, both from an empirical and a theoretical perspective. This will lead us to develop a new analysis, in which we will explore an alternative approach to head movement. However, first of all, let us look at the relevant set of data.

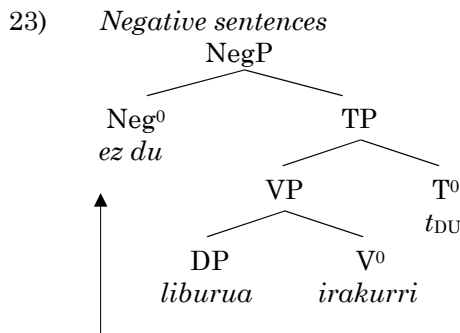
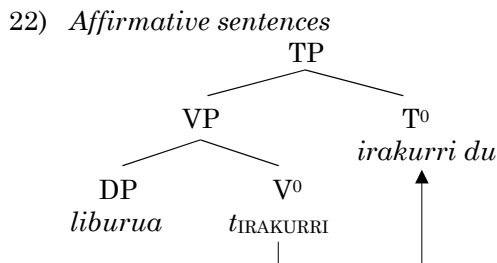
3.1 Basic data and the complex head analysis

In Basque affirmative clauses, the participle appears to the immediate left of the auxiliary, as shown in (20). In negative clauses, on the other hand, it is negation that appears to the immediate left of the auxiliary, while the participle is stranded in the right edge of the sentence (21)⁸.

20) Jonek liburua **irakurri du**
 Jon book read AUX
Jon has read the book

21) Jonek **ez du** liburua **irakurri**
 Jon no AUX book read
Jon hasn't read the book

The received account of this alternation (see A. Elordieta 2001 for a recent implementation and references) assumes a structure with mixed directionality, where VP and TP are head final, and NegP (dominating TP) is head initial⁹. In affirmative clauses, the participle undergoes V-to-T movement and incorporates into the auxiliary, which is sitting in T⁰. In negative clauses, on the other hand, the participle stays in its VP internal position, while the auxiliary undergoes T-to-Neg movement and incorporates into negation.



This analysis treats both [V Aux] and [Neg Aux] as complex heads. Three pieces of evidence are usually cited in support of this conclusion. First of all, in cases of wh-movement and focus fronting, a V2 effect obtains:

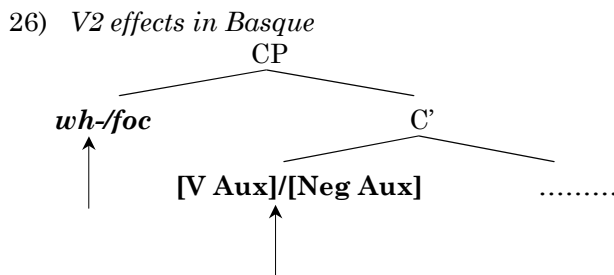
24) a. Zer **irakurri du** Jonek?
 what read AUX Jon
What has Jon read?
 b. LIBURUA **irakurri du** Jonek
 book read AUX Jon
It is the book that Jon has read

⁸ I will largely ignore the placement of arguments and adverbials. See Vicente (2004) for an approach to this issues compatible with the analysis developed here.

⁹ For simplicity, I ignore the possibly more articulated structure of VP and TP, since it is not relevant here.

- 25) a. Zer **ez du** Jonek irakurri?
 what no AUX Jon read
What hasn't Jon read?
 b. LIBURUA **ez du** Jonek irakurri
 book no AUX Jon read
It is the book that Jon hasn't read

Note that what gets into the second position is the whole [V Aux] or [Neg Aux] cluster. Most pieces of work make a parallel between this paradigm and Germanic V2, assuming that both can be treated in terms of T-to-C movement plus topicalisation (Ortiz de Urbina 1989, 1994, 1999; Albizu 1994; G. Elordieta 1997; A. Elordieta 2001; Reglero 2003)¹⁰. This is schematically shown below:



Obviously enough, for [V Aux] and [Neg Aux] to be able to move into C⁰, they must be a complex head, otherwise this operation would violate X-bar theoretic principles. The second piece of evidence supporting this analysis is that no argument or adverb can intervene between the two members of the cluster¹¹:

- 27) a. *Jonek **irakurri** liburua **du**
 Jon read book AUX
Jon has read the book
 b. *Jonek liburua **irakurri** gaur goizean **du**
 Jon book read today morning AUX
Jon has read the book this morning
 c. *Jonek **ez** liburua **du** irakurri
 Jon no book AUX read
Jon hasn't read the book
 d. *Jonek **ez** gaur goizean **du** liburua irakurri
 Jon no today morning AUX book read
Jon hasn't read the book this morning

This can be easily accounted for if [V Aux] and [Neg Aux] are actually complex heads, which cannot be split by phrasal material. However, this generalisation is not absolute. Certain SOAs, such as *omen* “apparently”, can appear inside the cluster. As a matter of fact, this is the only position available for *omen*:

¹⁰ An exception is Arregi (2001, 2002), who assumes that wh- words, foci, and verbs/auxiliaries do not move. Rather, other elements move, and the combination of those movements give rise to a V2 effect. Although his system derives some results quite elegantly (such as the distribution of stress), he is also forced to treat Basque as a wh- *in situ* language, which is clearly not correct. For one, Basque wh- words can license parasitic gaps, can undergo long distance wh- movement, and are sensitive to strong islands, all of which would be unexpected if Basque were effectively a wh- *in situ* language.

¹¹ Sometimes, a third argument is mentioned, namely, that [V Aux] and [Neg Aux] are phonological units (G. Elordieta 1997, A. Elordieta 2001). I find the argument rather weak, though, since all that it proves is, precisely, that these clusters are phonological units. This does not entail in any way that they should be syntactic units as well (in the same way that the English genitive 's forms a phonological unit with the possessor, even though both of them are usually kept as separate syntactic terminals).

- 28) a. Jonek liburua (*omen) irakurri (✓omen) du (*omen)
 Jon book read AUX
Allegedly, Jon has read the book
- b. Jonek (*omen) ez (✓omen) du (*omen) liburua (* omen) irakurri (* omen)
 Jon no AUX book read
Allegedly, Jon hasn't read the book

Traditionally, *omen* has been analysed as a head intervening between the two members of a [V Aux]/[Neg Aux] cluster. In affirmative clauses, the participle first incorporates into *omen*¹², forming the complex head [V *omen*], which incorporates further into the auxiliary yielding the final result [V *omen* Aux]. Similarly, for negative clauses, the auxiliary incorporates into *omen*, resulting in [*omen* Aux], and then into negation, for the final [Neg *omen* Aux].

3.2 Some discussion

The model described above, although it can be considered the standard one, has a number of shortcomings, both theoretical and empirical, that call for a substantial revision. This subsection is devoted to point out the problems this analysis raises.

3.2.1 Theoretical issues

Let us begin with some conceptual issues. First of all, consider the status of mixed directionality, which I regard as a pretty much sub-optimal option. The reason is that a structure with mixed directionality cannot be accommodated under the directionality parameter, which imposes a uniform X-bar schema on all projections in a given language¹³. This means that children learning Basque cannot resort to a mechanism that allows them to infer the basic structure of their language in a quick way. Rather, they have to determine the directionality of each projection independently of the others, which puts a larger burden in them than can be considered desirable. Note that this does not entail that mixed directionality is not allowed. It only entails that it is not the best option, and therefore we should only adopt it if evidence presses us hard to do so¹⁴. Since I will argue that a fully head initial structure is possible (and, in fact, yields better empirical results than the mixed directionality approach), there is no reason to maintain this analysis.

Second, the derivations sketched in (22) and (23) involve counter-cyclic movement. Intuitively, the alternation between affirmative and negative clauses boils down to the assumption that the auxiliary can be licensed by either the participle or negation –with the added twist that the presence of negation blocks licensing by the auxiliary. Therefore, V-to-T movement cannot apply immediately after T⁰ is introduced. Rather, we must hold up the movement until we see what the next head is. If it is negation, T-to-Neg movement applies and licensing by the participle is blocked. But if it is not, then V-to-T movement must apply. However, in this case it would be movement to a non-root position, in violation of the Strict Cycle Condition:

¹² I call this projection *omenP* for clarity, though this label carries no theoretical commitments. Recently, Haddican (2001) has identified it with the Modal Evidential (ModEv) head in Cinque's (1999) adverb hierarchy.

¹³ And, obviously, it cannot be accommodated under Antisymmetry either.

¹⁴ In this respect, it is interesting to refer to A. Elordieta's (2001) work. She argues that the directionality of a given projection is not arbitrary, but can be inferred from some inherent property of the head of that projection. Thus, she proposes that L-related heads (VP and TP) are head final, whereas non-L-related projections (NegP and CP) are head initial. In my opinion, though, she is only pushing the problem into a different domain. Now we can derive directionality from L-relatedness, but why should this property be relevant? Why not any of the other possible (and equally plausible) dichotomies that have been proposed through the years? For instance, lexical vs functional, nominal vs clausal/verbal, A vs A-bar, VP vs IP vs CP domains, theta vs non-theta assigners/assignees, case vs non-case marked/markers, and so on.

29) *The Strict Cycle Condition*

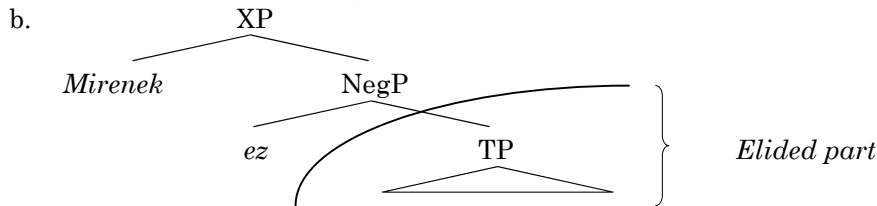
Within the current XP x , a syntactic operation cannot target a position included in an XP y if y is dominated by x ¹⁵.

Finally, this analysis does not comply with the Mirror Principle (Baker 1985) either. In the case of T-to-Neg movement, we would expect the result to be [Aux Neg], that is, the reverse order of the structural hierarchy. But, as we have already seen, what we get is the order [Neg Aux]. This also happens with T-to-Neg movement in which *omen* “apparently” intervenes –cf. (28). Movement of the auxiliary into *omen* results in a [*omen* Aux] order, in contrast to the [Aux *omen*] order that would be predicted by the Mirror Principle¹⁶.

3.2.2. Ellipsis

The first empirical argument against the complex head analysis is based on Laka’s (1990) observation that, in TP ellipsis constructions, it is possible to elide the auxiliary to the exclusion of negation. Assuming the null hypothesis that ellipsis can only target syntactic constituents, the data below suggest that, as opposed to what the complex head analysis postulates, negation and the auxiliary are located under different terminals:

- 30) a. Jonek liburua irakurri du, baina Mirenek ez
 Jon book read AUX but Miren no
Jon has read the book, but Miren hasn’t



Some further comments are necessary here so as to make this point valid. First, (13a) is not a case of constituent negation. In Basque, negated constituents follow negation, instead of preceding it as in (30a):

- 31) Jonek, eta ez Mirenek, irakurri du liburua
 Jon and no Miren read AUX book
It is Jon, and not Miren, who read the book

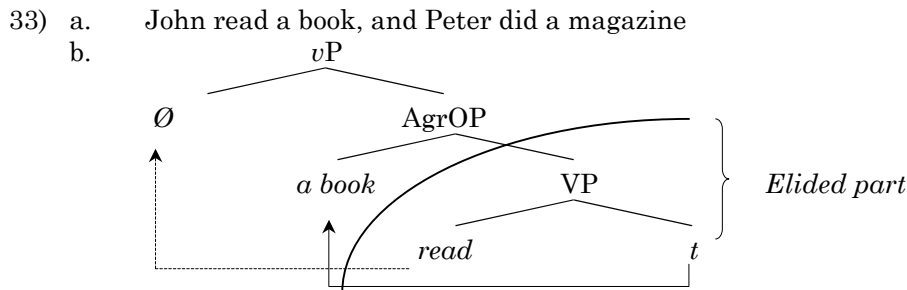
Second, as Aniko Liptak (p.c.) reminds me, it is not true that ellipsis can only target syntactic constituents. Under certain conditions, it is possible to elide word parts, as in (32a). I believe, nonetheless, that (32a) is not an instance of this kind of ellipsis. For one, word-part ellipsis always operates backwards, never forwards (32b), as opposed to TP ellipsis. Moreover, in cases of word-part ellipsis, the remnant of ellipsis must bear heavy contrastive stress, and so must its correlate in the second conjunct (32c). Again, no such thing is observed in (32a): negation need not be contrastively stressed, and there is no correlate that needs to be stressed in the first conjunct either:

¹⁵ A. Elordieta (2001:188fn) spots this problem and argues that it can be solved if “both V-to-T and T-to-Neg apply at the end of the same CP phase”. Note that this solves the counter-cyclicity problem by brute force (i.e., if movement applies at the end of a phase, then there is no meaningful notion of counter-cyclicity, at least within that phase), but still doesn’t explain why the presence of negation blocks V-to-T movement.

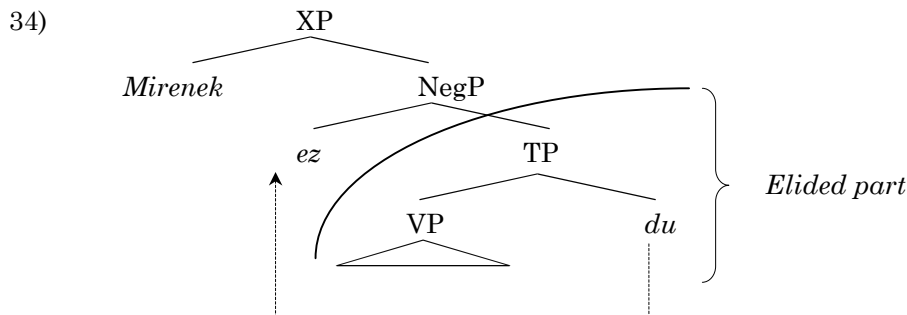
¹⁶ As Mark de Vos (p.c.) points out, V-to-T movement in affirmative clauses may also violate the Mirror Principle if we assume that rightward head movement adjoins the moved head to the *right* of the host. In this case, we would expect the order [Aux V] rather than the observed [V Aux]. This problem, though, disappears if we assume that head movement always results in adjunction to the left of the host, irrespective of the direction of movement.

- 32) a. This is not a pre-, but a postposition
 b. * This is not a preposition, but a post-
 c. This is not a PRE-, but a POSTposition

Finally, Jeroen van Craenenbroeck (p.c.) has pointed out to me that it could possible to maintain the complex head analysis and still account for (30a) if we adopt Lasnik’s (**reference?**) account of English pseudo-gapping¹⁷. Lasnik claims that a sentence like (33a) is actually an instance of VP ellipsis. He assumes that in English there is overt object shift, followed by short verb movement in order to restore the VO order. Now, suppose that the verb doesn’t move. A strong feature would remain unchecked, and the derivation should crash. However, Lasnik claims that if we elide the VP, the offending feature will be deleted too, and the derivation will converge. This analysis is represented in (33b), where the discontinuous arrow represents the movement that should have applied but didn’t:



A. Elordieta (2001:184 ff) proposes a similar analysis. She claims that T-to-Neg movement has failed to apply in (30a). Therefore, the licensing requirement of the auxiliary is not satisfied¹⁸. In the same way as Lasnik, she argues that the derivation can still converge is we elide TP, so that the offending auxiliary is removed from the structure.

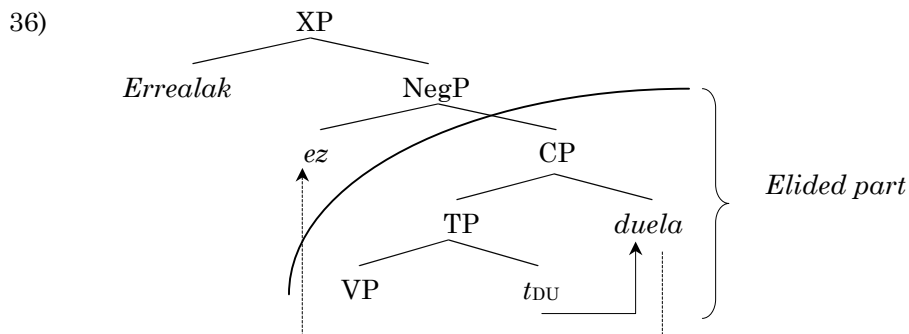


However, this analysis cannot account for more complicated cases in which the elided TP belongs in an embedded clause. Consider the paradigm below.

- 35) a. Esan didate [Athleticek bere partidua irabazi duela], baina [Errealak ez]
 tell AUX Athletic POSS match win AUX.C but Real no
I've been told that Athletic have won their match, but that Real haven't
 b. Esan didate [Errealak ez duela bere partidua irabazi]
 tell AUX.C Real no AUX.C POSS match win
I've been told that Real haven't won their match

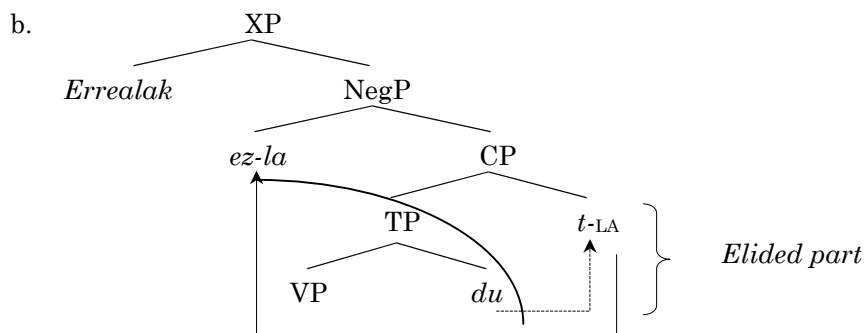
¹⁷ Disregarding certain problems with Lasnik’s analysis –cf. Boeckx & Stjepanovic (1999) and Baltin (**reference?**).
¹⁸ In her system, T-to-Neg movement is a result not of feature checking, but of “lexicalisation requirement” on the auxiliary, which forces it to be attached to another head in the verbal domain –namely, negation. However, as far as I can see, this does not affect neither her argument nor mine.

As we can see in (35b), the complementiser *-la* appears attached to the [Neg Aux] cluster. Since nothing can intervene between the auxiliary and the complementiser, and since the complementiser also takes part in movement into second position, A. Elordieta would have to propose that [Neg Aux C] is a complex head as well, formed through incorporation¹⁹. Therefore, the second conjunct in (35a), where both the auxiliary and the complementiser have been elided without affecting negation, must be derived by eliding a constituent containing the un-incorporated auxiliary and negation. The derivation is given below:



This derivation is well-formed according to A. Elordieta's assumptions. The question arises, though, of how example (37a) can be ruled out. In principle, T-to-C movement could fail to apply. In this case, we would elide TP in the same way as in (30a). However, we can still apply C-to-Neg movement, incorporating the complementiser into negation without affecting the auxiliary, as represented in (37b). Notice that C-to-Neg movement is necessary anyway in this system (otherwise 35a could not be derived), and that, whatever its motivation might be (i.e., feature checking, lexicalisation requirement,...), there is no obvious way to block it in this case²⁰:

- 37) a. * Esan didate [Athleticek bere partidua irabazi duela], baina [Errealak ez-la]
 tell AUX Athletic POSS match win AUX.C but Real no.C
I've been told that Athletic have won their match, but that Real haven't



As we can see, the analysis A. Elordieta proposes can account for (35a), but incorrectly rules (37a) in. One way to account for this set of data is to say that (i) the auxiliary and the complementiser do indeed form a complex head, and (ii) there is no incorporation into negation. Maintaining our initial assumption that ellipsis only targets syntactic constituents, we can say that (37a) is ungrammatical because [Aux C] is a complex head

¹⁹ This seems to be the most natural analysis for complementisers in her system, although she doesn't discuss it explicitly **double-check her book, just in case she mentions it at some point**

²⁰ Unless we say that, whenever T-to-C movement is blocked, C-to-Neg movement must be blocked too.

and cannot be split by ellipsis: if the auxiliary is elided, the complementiser must go as well, and vice versa. On the other hand, since there is no incorporation into negation, we can elide the phrase below negation without affecting the latter. However, the moment we accept this conclusion, we must accept as well that the auxiliary and negation do not form a complex head. Therefore, I take TP ellipsis to show that [V Aux] and [Neg Aux] are not complex heads.

3.2.3. SOAs

At the end of section 1.1 I mentioned that the [V Aux] and [Neg Aux] clusters cannot be disrupted by any kind of argument or adverbial. The relevant paradigm is repeated here for convenience:

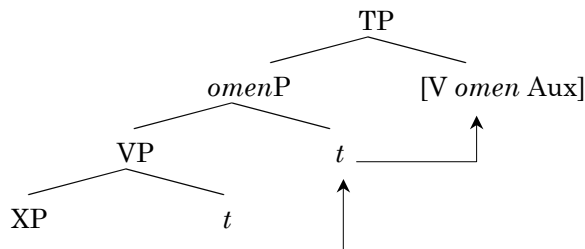
- 27) a. *Jonek **irakurri** liburua **du**
 Jon read book AUX
Jon has read the book
- b. *Jonek liburua **irakurri** gaur goizean **du**
 Jon book read today morning AUX
Jon has read the book this morning
- c. *Jonek **ez** liburua **du** irakurri
 Jon no book AUX read
Jon hasn't read the book
- d. *Jonek **ez** gaur goizean **du** liburua irakurri
 Jon no today morning AUX book read
Jon hasn't read the book this morning

However, this does not mean that nothing at all can intervene between both members of the cluster. Recall that some SOAs, such as *omen* “apparently”, can break the otherwise unbreakable adjacency:

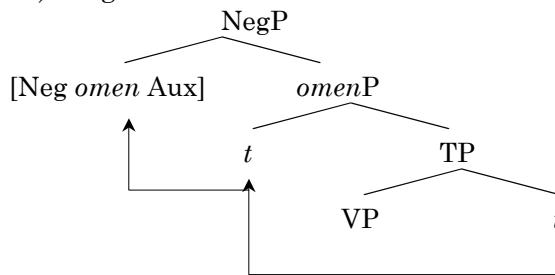
- 28) a. Jonek liburua (*omen) **irakurri** (✓omen) **du** (*omen)
 Jon book read AUX
Allegedly, Jon has read the book
- b. Jonek (*omen) **ez** (✓omen) **du** (*omen) liburua (*omen) irakurri (*omen)
 Jon no AUX book read
Allegedly, Jon hasn't read the book

In the complex head analysis, these sentences are analysed by assuming that *omen* is actually the head of a projection. A second (crucial) assumption is that this projection lies between the projections headed by either member of the [V Aux] and [Neg Aux] clusters. In this way, given the Head Movement Constraint, the lower head cannot incorporate into the upper one without first incorporating into *omen*:

38) Affirmative clauses



39) *Negative clauses*



As is easy to see, there is an important asymmetry between (38) and (39). In the former, *omenP* is merged between VP and TP, whereas in the latter it is merged somewhat higher, between TP and NegP. Bear in mind that the problem is not that there are two different merger sites for *omenP*—as a matter of fact, it seems to be possible to merge some adverbs in two different positions (cf., adverbs like *often* in Cinque’s hierarchy). The problem is that each merger site has to be linked to the polarity of the clause. In other words, for *omen* to appear always between the two members of the cluster, the grammar must be constrained in such a way that affirmative clauses only allow the low merger site of *omenP*, whereas negative clauses only allow the upper one. Unless we can find a non-stipulative way to express this link, the complex head analysis clearly overgenerates possible surface positions for *omen*.

Suppose, for the sake of the argument, that we somehow manage to constraint the system in exactly this way. Even in this case, the merger site of *omenP* would still be problematic. Specifically, it is not clear at all that it can be merged so low in the structure. Bear in mind that *omen* is a SOA. In Cinque’s (1999) hierarchy, these elements are introduced in the highest part of the clause, well above TP. Also, Nilsen (2003) argues that their semantics prevents them from being merged below negation. If Cinque’s and Nilsen’s arguments are correct, and *omen* needs to be introduced in such a high position, then the analysis in (38) and (39) becomes suspicious. An indication that the arguments are correct is that, as hinted at in the translations of (28), *omen* takes scope over the whole clause. This is especially clear in negative clauses, where we can test the scope interactions of *omen* and negation. The fact is that *omen* takes obligatory wide scope over negation, in spite of its linear position:

- 40) Jonék ez omen du liburua irakurri
 Jon no apparently AUX book read
 ✓ *It seems to me that it is not the case that Jon has read the book* [omen >> ez]
 * *It is not the case that it seems to me that Jon has read the book* [ez >> omen]

Given the analysis in (39), the obligatoriness of the inverse scope reading is unexpected. In order to derive it one has to assume excorporation of *omen* plus obligatory QR. However, excorporation is condemned by most current views of syntax, primarily due to the fact that (as opposed to incorporation), there are no clear cases of excorporation. Further, QR is taken to be an optional operation, so it is quite stipulative to say that it is obligatory in this particular case. Finally, both operations must apply: if only one of them did, we would not get the desired result.

In the analysis I will develop later, *omen* is merged in a very high position, above negation and tense. After that, something (negation in negative sentence, the verb in affirmative sentences) moves to its left, yielding the correct word order. I will argue that this movement is semantically inert, therefore the moved item must be interpreted in its base position. The observed inverse scope follows from this. However, the conclusion is the same as in the previous section. If negation and the verb have to move around *omen*, stranding the auxiliary, we must accept that they are separate syntactic terminals, in contradiction to what the complex head analysis postulates.

3.3 Interim conclusion

In this section, we have seen that the complex head analysis, for all of its intuitive appealing, faces serious empirical and theoretical problems. We have pointed out a total five counterarguments to it, namely, (i) the inelegance of a mixed directionality system, (ii) violations of the Mirror Principle, (iii) counter-cyclic movement, (iv) TP ellipsis, and (v), SOAs. Especially the last three seem to me to be compelling enough so as to motivate a substantial revision of the analysis. This is what I will attempt in the upcoming sections.

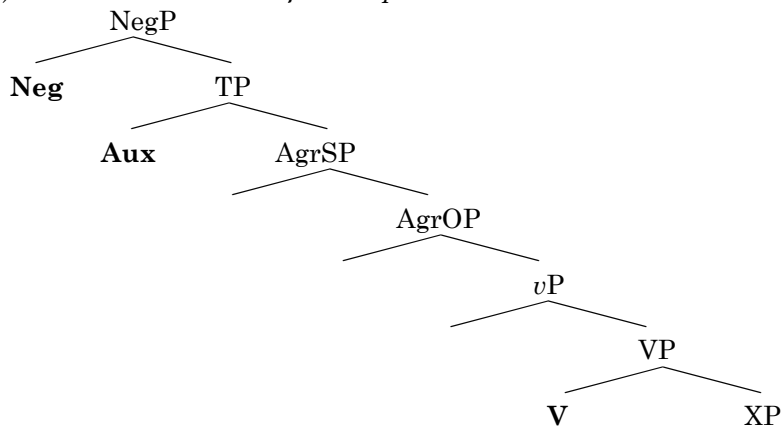
4. A new analysis

4.1 Preliminaries

4.1.1. Structure.

Before starting with the analysis, some background assumptions are in order. I will assume that Basque conforms to the following clausal hierarchy (specifier positions omitted for simplicity).

41) *The clause structure for Basque*



The most obvious characteristic of this structure is that it is fully head initial, as opposed to what is assumed by most of the literature. However, I will argue that this is actually the correct underlying structure, despite what the surface order may lead us to believe. Recall that in the traditional analysis TP is head final. Therefore, the auxiliary appears in clause final position. In order to bring it to the front of the clause in negative sentences, it is necessary to assume that it incorporates into the head initial NegP. However, as I have shown in the previous section, T-to-Neg movement is not a possibility, so in order to get the [Neg Aux] order at the beginning of the clause, we need to assume that both negation and the auxiliary are located in head initial positions, so that they appear at the left edge of the clause by default²¹.

²¹ Of course, this raises the question of why [V Aux] appears in clause final position. In the line of Hallman (2003), I will assume that it is due to remnant movement of the sister of the auxiliary to the left of [V Aux]. This hypothesis also opens up the possibility that only a sub-constituent undergoes fronting, rather than the whole sister. In this case, we would get a V2 effect. I take all these movements to take place for phonological reasons. See Vicente (2004) for a full implementation on this issue.

4.1.2. On Neg(P)

The main issue I wish to touch now is the position of negation, which is quite high. Over the years, a number of attempts have been made at relocating it somewhere in the middlefield of the clause, and derive its surface position through movement. For instance, Ortiz de Urbina (1994) and G. Elordieta (1997) argue that NegP is merged between VP and TP. A nice side effect of this assumption is that it circumvents the counter-cyclicity problem noted in section 1.2.1 in quite an elegant way: the auxiliary, which is in T⁰, needs to attract a head to satisfy its requirements. In affirmative clauses, it attracts the verb. However, in negative clauses, negation is closer and, by the usual definitions of economy of movement, it blocks verb movement²².

The main virtue of this approach is also its main problem. As is clear from the above paragraph, negation is going to block V-to-T movement in all cases. There are, nonetheless, a small number of cases in which V-to-T movement takes place in the presence of negation. In Basque, most verbal forms are composed of a two items: a lexical verb and an auxiliary. However, there is a handful of verbs in which a verbal root forms a word-like unit with the different inflectional morphemes²³. These *synthetic* verbs –also called *trinko*, after their label in traditional Basque grammars- are quite uncontroversially assumed to surface in T⁰, since they show the same distribution of auxiliaries. Some examples are given below:

- 42) a. Jonek liburua dakar
Jon book bring
Jon brings the book
- b. Jonek ez dakar liburua
Jon no bring book
Jon doesn't bring the book
- c. Zer (ez) dakar Jonek?
what no bring Jon
What does(n't) Jon bring?
- d. LIBURUA (ez) dakar Jonek
book no bring Jon
It is the book that Jon does(n't) bring

Example (42a) shows how a synthetic verb appears in clause final position in an affirmative sentence, in the same way as [V Aux]. In (42b), a negative sentence, it clusters with negation around the beginning of the sentence, as [Neg Aux] does. In (42c) and (42d) we see how the presence of a *wh*- word and a focalized constituent triggers a V2 effect, in the same way as it does with [V Aux] and [Neg Aux]. In sum, this data set supports the idea that synthetic verbs show the same distribution as auxiliaries in compound verbal forms. Therefore, V-to-T movement is assumed in order to account for the fact that the verbal root *-(e)kar* “to bring” in 42) combines with the different inflectional morphemes. Now, if we accept this analysis, we encounter a serious problem with (42b), where negation does not seem to block V-to-T movement. Moreover, we have to account for the fact that negation, is independent from the synthetic verb, since it also behaves like auxiliaries with regard to TP ellipsis (section 3.2.2) and positioning with respect to *omen* (section 3.2.3).

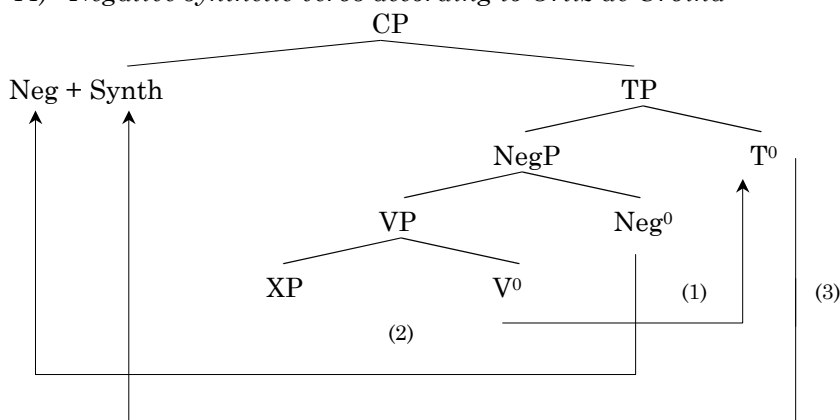
²² There is a difference between the two analyses, though. G. Elordieta assumes Antisymmetry, therefore in his analysis [Neg Aux] is clause initial without any further operations. On the other hand, Ortiz de Urbina claims that TP is head final in Basque. To prevent [Neg Aux] to appear at the end of the clause, he assumes that this complex head undergoes further movement to a head initial CP. This difference does not affect my argument, in any event.

²³ These verbs up add to around twenty, and they do not form a coherent set by any criterion I am aware of. Some of them are *izan* “to be (existential)”, *egon* “to be (locative)”, *ukan* “to have (possessive)”, *etorri*, “to come”, *joan* “to go”, *ekarri* “to bring”, *irakin* “to boil (intr.)”, or *egokin* “to correspond to”. The use of synthetic verb forms results in a non-perfective habitual reading, which is unavailable with compound forms.

- 43) a. Jonek liburua dakar, baina Mirenek ez
 Jon book brings but Miren no
Jon brings the book, but Miren doesn't
 b. Jonek ez (✓omen) dakar (*omen) liburua (*omen)
 Jon no bring book
Apparently, Jon does not bring the book

Ortiz de Urbina's solution is to say that V-to-T movement in synthetic verbs skips over negation. He claims that Neg⁰ is a head of a different kind from V⁰ and T⁰, therefore we can circumvent the HMC in this case. Next, negation moves to a left peripheral C⁰ head, and finally, the synthetic verb moves from its clause final T⁰ position to the clause initial C⁰. In this way, we can account for the observation that the synthetic verb shows the distribution of auxiliaries. The paradigm in (43) would also receive the same explanation as similar facts with compound verbs:

44) *Negative synthetic verbs according to Ortiz de Urbina*



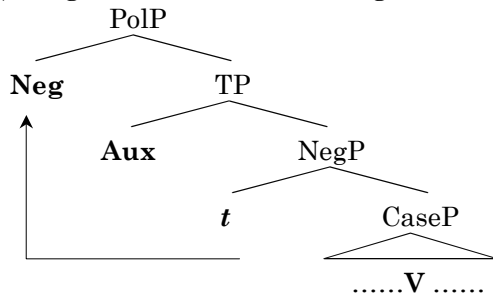
Although this analysis solves the problem, it does so in quite an inelegant way. For one, it cannot explain why this derivation is not available for compound verbs. If there was, we would get a result like (45), which is ungrammatical:

- 45) *Jonek ez irakurri du liburua
 Jon no read AUX book
Jon hasn't read the book

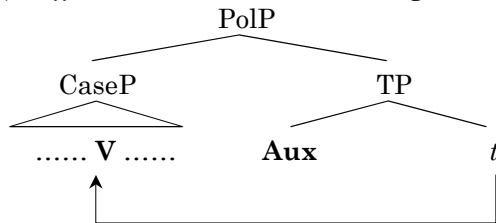
A different approach to the placement of negation is taken by Haddican (2001), working in a framework along the lines of that of Koopman & Szabolcsi (2000)²⁴. He also takes the view that NegP is merged somewhere between VP and TP, but he claims that negation itself is not the head but the specifier of NegP. He also postulates a Pol(arity)P above TP. He argues that either negation or CaseP (a projection above VP containing the verb and traces of various elements) can raise to SpecPolP. In negative sentences, negation is the closest element to PolP, so it blocks movement of CaseP. In affirmative sentences, it is CaseP that moves, dragging the verb along.

²⁴ The key ingredients of this framework are Antisymmetry, absence of covert movement, and absence of head movement. These features create a very restrictive generative system, which is compensated by a phrase structure of tremendous complexity and the massive use of remnant movement (see Barbiers 2003 for a critical overview).

46) *Negative sentences according to Haddican*



47) *Affirmative sentences according to Haddican*



While, technically speaking, Haddican’s analysis can account for the distribution of verbs, auxiliaries, and negation, the reasoning behind its details is quite suspicious. For one, he claims that PolP attracts elements with some polarity content. I agree that negation qualifies as such an element, but one would be hard pressed to pin down any kind of polarity content in CaseP²⁵. Moreover, one would have to restrict the set of polarity-related elements that PolP can attract to either negation or CaseP. Otherwise, we would expect PolP to attract some n-words that are arguably higher than Haddican’s NegP (f.i., some negative time adverbs such as *inoiz* “never”), blocking movement of negation. This would produce ungrammatical sentences like (48a) –compare to the grammatical (48b):

- 48) a. * *Jonek inoiz du ez liburua irakurri*
 Jon never AUX no book read
 Jon has never read the book
- b. ✓ *Jonek ez du inoiz liburua irakurri*
 Jon no AUX never book read
 Jon has never read the book

Another piece of evidence that Haddican cites in favour of his analysis is the obligatory inverse scope reading of negation with respect to SOAs such as *omen* “allegedly”, as we already discussed in section 3.2.3. Let us recall the relevant example:

- 40) *Jonek ez omen du liburua irakurri*
 Jon no apparently AUX book read
 ✓ *It seems to me that it is not the case that Jon has read the book* [omen >> ez]
 * *It is not the case that it seems to me that Jon has read the book* [ez >> omen]

For this example, Haddican assumes that there is a projection hosting *omen* between TP and PolP. Therefore, when negation moves to SpecPolP, it appears to the left of *omen*, yielding the correct surface order. The inverse reading is the result of obligatory reconstruction of negation to its base position. It is, nonetheless, unclear that negation can be interpreted so low (recall that Haddican places it right above the expanded VP area). For

²⁵ To be sure, it is not an NPI, because otherwise affirmative sentences would be ungrammatical. It is not an NPI licenser either because NPIs are ungrammatical in affirmative sentences. Finally, it is not a PPI because it can occur under the scope of negation (in negative sentences).

one, negation can license immediately post-auxiliary NPIs, which can quite reasonably be taken to be higher than Haddican’s NegP. If negation is actually interpreted as low as Haddican suggests, the grammaticality of (49a) is unexpected. Note further that we cannot argue that reconstruction of negation can be blocked in order to provide a licenser for the NPI. Example (49b), collected from the internet, features both *omen* and an immediately post-auxiliary NPI. In this example, the NPI is licensed and *omen* takes wide scope over negation. In Haddican’s terms, this entails a paradox in which negation is interpreted both in its base and its moved position at the same time, in order to satisfy the requirements of both the NPI and *omen*. The conclusion, then, is that NegP cannot be as low as Haddican proposes:

- 49) a. ✓ Jonek ez du ezer irakurri
 Jon no AUX anything read
Jon hasn’t read anything
- b. ✓ Patronatuko agintariak ez omen zien ezer erantzuten
 Corporation manager no apparently AUX anything answer
Apparently, the president of the corporation wasn’t giving them any answers

From this section we can draw two main conclusions. First, that NegP is not placed below TP. We have seen that locating it in such a low position raises serious problems, the most serious amongst which is probably the mechanism for moving it to the front of the sentence. Later in the paper, I will argue that it is more advantageous to have NegP in a higher position –above TP–, as has already been argued by Laka (1990) and A. Elordieta (2001). This alternative is not entirely innocuous either. For one, Zanuttinni (1996 and references) has argued that Romance languages provide for a number of different NegP positions, located lower than TP. Is it reasonable, then, to assume that the Basque NegP is so high? Obviously, I believe it is. As Iatridou (1990:352-353) argues:

“Are the data from one language in favour of a functional projection sufficient for us to postulate that the same functional category exists in all languages? [...] I will prefer the weaker position according to which languages vary with respect to the functional categories they instantiate, and therefore evidence for [functional projections] will have to be found in each language separately”

That is, I follow the line of work during the last decade (Thraisson 1996; Grimshaw 1997; Bobaljik & Thrainsson 1998; Neeleman & Weerman 1999, and more recently, Bury 2003) that argues that syntactic structure is not totally universal, and that some of its fine details (e.g., whether a given language has AgrP or not, or where NegP is located) have to be learnt²⁶. In this case, we can argue that Basque provides enough positive evidence to assume that NegP is indeed in that very high position. Moreover, we can also claim it is base-generated there, because there seem to be no compelling reasons to situate it in a lower slot and derive its surface position through movement (specifically, it never surfaces in such a low position, and it is not related to the lower projections in any obvious semantic or syntactic way, unlike the way in which, f.i., *wh*- words are related to their launching sites)

The second conclusion that we can draw from this section is that the placement of negation, auxiliaries, and the verb is not feature-driven. As I have already mentioned in passing, I take the auxiliary to be at the front of the clause by default, and the [Neg Aux] and [V Aux] orders are derived by placing negation and the auxiliary respectively to the left of the auxiliary. That is, my analysis is similar to Haddican’s²⁷. However, if we want to encode this analysis in terms of feature checking, we have to identify a common feature to

²⁶ Of course, this contrasts with the hypothesis defended by, i.a., Rizzi (1997), Cinque (1999), and much work in their wake. See, however, Nilsen (2003:ch 1) for an argument that such elaborate universal hierarchies fail to capture some properties of the distribution of different constituents (particularly adverbs).

²⁷ With the two very important differences that (a) I take negation to be base generated higher than TP rather than moved from below, and (b) I claim that verb fronting cannot be remnant movement (cf. 28).

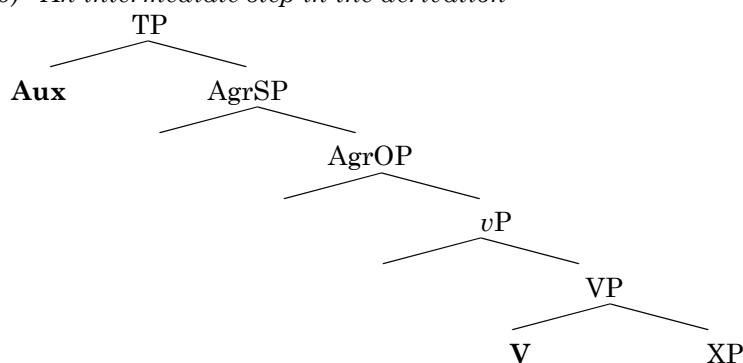
both negation and verbs. As we have already seen, polarity is not be such a feature. In fact, as far as I can see, there is none. Consequently, I will argue that the distribution of verbs, auxiliaries and negation is regulated by the interaction of the phonological properties of these elements and a derivational approach to syntax (a la Epstein *et al* 1998 and subsequent works).

4.2 Verb placement in Basque revisited

4.2.1. The basics

After this lengthy detour, let us begin tackling the distribution of the different elements. The beginning point is a statement common in most discussion of verb placement in Basque, namely, that the auxiliary needs to be “licensed”. What do we mean by “licensed”? To answer this question, consider a derivation at the point where the TP level has been completed:

50) *An intermediate step in the derivation*



We must ask ourselves what would go wrong with this structure if the auxiliary was not adjacent to either negation or the verb. As I mentioned at the end of the previous section, we would get a phonologically ill-formed structure. An uncontroversial assumption in the literature is that finite verb forms are clitics (G. Elordieta 1997; Ortiz de Urbina 1999; A. Elordieta 2001). A well-known property of clitics is that, in many languages, they cannot appear in initial position. The paradigm below shows that this generalization does hold for Basque. Auxiliary initial sentences are ungrammatical (51a). It is necessary to antepose either negation, a verb, or the particle *ba*²⁸:

- 51) a. * Du Jonek liburua irakurri
 AUX Jon book read
 b. ✓ Irakurri du Jonek liburua
 read AUX Jon book
 c. ✓ Ez du Jonek liburua irakurri
 no AUX Jon book read
 d. ✓ Ba du Jonek liburua irakurri
 ba AUX Jon book read

The point is even sharper if we consider the synthetic verbs introduced in the previous section. On the one hand, they are finite verb forms, so they should be clitics too, according to Ortiz de Urbina’s claim. On the other hand, they are not associated a free-standing non-finite verbal form as compound verbs. This means that, in the absence of negation, they

²⁸ Laka (1990) claims that *ba* is the emphatic affirmative counterpart of negation. Ortiz de Urbina (1994) argues against this view on the grounds that *ba* need not always be associated with an emphatic meaning.

stand on their own. In this case, they are perfectly acceptable unless they appear in initial position²⁹:

- 52) a. * Dakar Jonek liburua
 bring Jon book
 b. ✓Ez dakar Jonek liburua
 no bring Jon book
 c. ✓Ba dakar Jonek liburua
 ba bring Jon book
 d. ✓Zer dakarJonek?
 what bring Jon
 e. ✓LIBURUA dakar Jonek
 book bring Jon

Examples (52a-c) are parallel to their counterparts in (51). What is interesting here is the grammaticality of (52d) and (52e). In these sentences, the synthetic verb is right-adjacent to a *wh*-word and a focalized constituent, respectively. These items do not seem to bear a relation of any kind to the verb. However, they prevent the verb from being in the first position, which results in ungrammaticality (52a). This confirms the hypothesis that auxiliary licensing in Basque is simply an instance of the wider ban against clitics appearing in clause initial position.

Having established this, a number of questions come to mind. First of all, the above discussion assumed implicitly that there is a hierarchy in what elements are allowed to intervene between a tensed form and the first position. That is, negation and the verb are the first options to try. In case none of them is present (as in 52d and 52e), one can resort to other elements, like *wh*-phrases and focused constituents. But why should this be so? If the only requirement is that the tensed form must not appear in initial position, the null hypothesis is that there should not be such a hierarchy. Simply, any constituent should be able to move to the left of the auxiliary, probably the closest one, as Holmberg (2000) argues is the case in Scandinavian stylistic fronting. A restriction to the verb and negation needs some explanation³⁰. Since this point requires a separate discussion, I will return to it at the end of this section.

Let's tackle now the question that we had left pending earlier. Why does negation block verb movement, if both are equally fit to keep the auxiliary away from the first position? Going back to (51a), the auxiliary here is clause initial, hence we need to put something in front of it. Let's assume, for the sake of the argument, that we are constructing a negative sentence. Therefore, we have two options to choose from: either we merge negation or we move the verb from its base position. As we already know, only the first one would give the correct result. How do we force it?

Suppose we move the verb first. This puts the auxiliary in the second position, which is the correct result. However, negation still needs to be merged for compositional reasons – recall that we are deriving a negative sentence. The result we get is ungrammatical:

- 53) a. * Ez irakurri du...
 no read AUX
 b.
-

²⁹ Thanks to Jeroen van Craenenbroeck and Georges Rebuschi (p.c.) for reminding me of this.

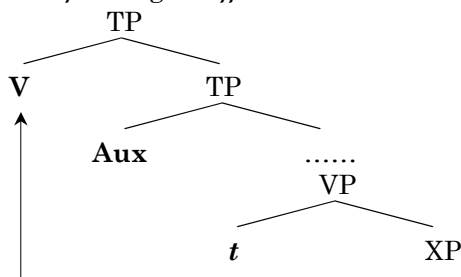
³⁰ Thanks to Øystein Nilsen (p.c.) for raising this point.

Suppose now we take the other option, that is, we merge negation first. With this operation, we remove the auxiliary from the first position and merge negation into the structure. Moreover, verb fronting is blocked. The only motivation for verb fronting is to keep the auxiliary from appearing in the first position. But, since we already have this result as a consequence of merging negation, we lose the trigger for verb movement. Therefore, the verb stays down, and we derive the [Neg Aux].....V order.

Compare both options now. At the TP level, we are faced with two tasks: (i) merging negation into the structure, and (ii) removing the auxiliary from the first position. Both derivations can satisfy these requirements, but there is a crucial difference. If we move the verb first, we satisfy the Wackernagelian property of the auxiliary, but we still need to merge negation. On the other hand, if we merge negation first, we satisfy both requirements in one operation. Since this latter option is more economical (one operation instead of two), it blocks the former.

In affirmative sentences, on the other hand, negation is not available, for obvious reasons. Consequently, the only option available is to move the verb from its base position. I will assume that this involves movement of the bare verb, and that it simply adjoins to TP³¹ instead of creating a new head position –since, in essence, there is no motivation for the extra head:

54) *Verb fronting in affirmative sentences.*



Note that this derives the strict adjacency exemplified in (27) and repeated below. The reasoning is similar to the one we used to derive negative clauses. Under the assumption that only negation or the verb are suitable to “license” the auxiliary, deriving these examples would require moving or merging some other element at the point where merger of negation or movement of the auxiliary is required. Such an operation is blocked because it would contribute nothing to the structure, and it would block a required operation.

- 27) a. *Jonek **irakurri** liburua **du**
 Jon read book AUX
Jon has read the book
- b. *Jonek liburua **irakurri** gaur goizean **du**
 Jon book read today morning AUX
Jon has read the book this morning
- c. *Jonek **ez** liburua **du** irakurri
 Jon no book AUX read
Jon hasn't read the book
- d. *Jonek **ez** gaur goizean **du** liburua irakurri
 Jon no today morning AUX book read
Jon hasn't read the book this morning

³¹ Technically, this movement should be dubbed head-to-adjunct. However, for exposition, I will subsume it under head-to-spec, since nothing I say here hinges on the choice of the label. On a different level, I would like to acknowledge that a similar analysis has been proposed by Albizu (1991), although he assumed that the participle adjoined to C⁰ skipping over T⁰.

4.2.2. Against remnant VP movement.

We have seen that Basque affirmative clauses arguably involve head-to-spec movement of the verb. However, before concluding that this is the correct analysis, we must discard an alternative derivation. Can (54) be reanalyzed in terms of remnant VP movement? The answer is “no”. To see why, consider first the following paradigm, involving a matrix negative clause with a bridge verb. As (55) shows, the complement clause can appear at either side of the verb, which, as corresponds to a negative clause, stays inside VP. Both sentences are acceptable (even though 55b sounds a bit stilted):

- 55) a. ✓Ez dut uste [Jonek liburua irakurri duela] [V>CP]
 no AUX think Jon book read AUX.C
 I don't think that Jon has read the book
- b. ✓Ez dut [Jonek liburua irakurri duela] uste [CP>V]
 no AUX Jon book read AUX.C think
 I don't think that Jon has read the book

Consider (56) now, where we are trying to extract a wh- word from the embedded clause. This is only possible if the embedded clause is post-verbal:

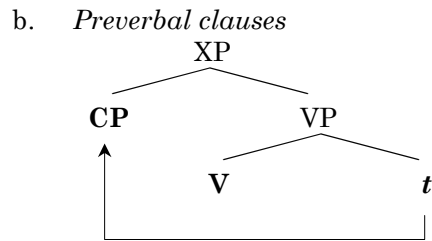
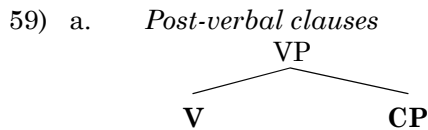
- 56) a. ✓Zer ez duzu uste [irakurri duela Jonek t]? [V>CP]
 what no AUX think read AUX.C Jon
 What don't you think that Jon has read?
- b. *Zer ez duzu [irakurri duela Jonek t] uste? [CP>V]
 what no AUX read AUX.C Jon think
 What don't you think that Jon has read?

Ormazabal *et al* (1994) report a similar phenomenon with affirmative clauses. If we have a sequence of three embedded clauses, extraction from the deepest one is only possible if the order is 1>2>3, where 1 is the matrix clause. Extraction from a 1>3>2 sequence is ungrammatical, even though that sequence is allowed in non-interrogative sentences.

- 57) a. ✓Uste dut [esan duzula [Jonek liburua irakurri duela]] [1>2>3]
 think AUX say AUX.C Jon book read AUX.C
 I think that you have said that Jon has read the book
- b. ✓Uste dut [[Jonek liburua irakurri duela] esan duzula] [1>3>2]
 think AUX Jon book read AUX.C say AUX.C
 I think that you have said that Jon has read the book
- 58) a. ✓Zer uste duzu [esan dudala [irakurri duela Jonek t]]? [1>2>3]
 what think AUX say AUX.C read AUX.C Jon
 What do you think that I have said that Jon has read?
- b. *Zer uste duzu [[irakurri duela Jonek t] esan dudala]? [1>3>2]
 what think AUX read AUX.C Jon say AUX.C
 What do you think that I have said that Jon has read?

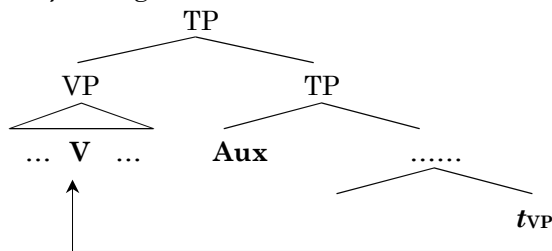
The generalisation that emerges from the above paradigm is that extraction out of a clause is only possible if that clause is to the right of its selecting verb. What I want to propose is that this is an instance of the more general prohibition against movement out of derived positions (see Stepanov 2001 for a recent overview and references). If we assume that VP is head initial in Basque, as (59) shows, the post-verbal position of complement clauses is their base-generated one. The preverbal position in the (b) examples is derived by movement to a higher position³².

³² At present, I have no explanation for this movement, though.



This hypothesis allows us to explain the data in (55) through (58) in terms of the impossibility of extraction out of derived positions. We can state now the correlation that constituents scrambled out of VP become islands for wh- extraction. In this light, consider now the movement in (54), reinterpreted as remnant VP movement.

60) *Verb fronting as remnant movement*



For (60) to take place, we are required to evacuate VP of all material except for the verb. But, in accordance to what we have concluded in the previous paragraph, constituents moved out of VP –complement clauses included- should become islands for wh- extraction. In other words, we predict that, if we want to derived affirmative orders through remnant VP movement, the embedded clause will always be an island. This is a blatantly incorrect prediction, since long distance wh- movement is allowed in Basque, as the (a) examples in (55) through (58) show. The conclusion, then, is that verb fronting in affirmative clauses cannot be remnant movement as in (60). Since it cannot be incorporation into the auxiliary either (see the reasons in section 3.2), we are led to the conclusion that it must be long head movement as exemplified in (54).

4.2.3. SOAs reconsidered.

One of the quirks of verb placement is that the adjacency between the auxiliary and negation or the verb can be broken by certain SOAs such as *omen*, apparently. The paradigm is repeated below:

- 28) a. Jonek liburua (*omen) irakurri (✓omen) du (*omen)
 Jon book read AUX
Allegedly, Jon has read the book
- b. Jonek (*omen) ez (✓omen) du (*omen) liburua (*omen) irakurri (*omen)
 Jon no AUX book read
Allegedly, Jon hasn't read the book

Why is it that *omen* can –in fact, must- appear in that position? The answer I would like to give is that it is a clitic, the same as the auxiliary. Therefore, it is banned from appearing in first position. This idea is supported by the following set of data:

- 61) A: Irakurri du Jonek liburua?
 read AUX Jon book
Has Jon read the book?

- B: a. * Omen du
 apparently AUX
 b. ✓ Ba omen du
ba apparently AUX
 c. ✓ Ez omen du
 no apparently AUX

62) A: Zer irakurri du Jonek
 what read AUX Jon
What has Jon read?

- B: a. ✓ Liburua omen
 book apparently
 b. * Omen liburua
 apparently book

This pattern is identical to the one I used in (51) and (52) to show that finite verb forms are clitics. In (61Ba), the auxiliary is not initial, so that cannot be the cause of the ungrammaticality. In both (61Bb) and (62Bc), something has been inserted to the left of *omen*, rendering the examples ungrammatical. In parallel with (51)/(52), this suggests that *omen* is also a Wackernagelian clitic that cannot appear in first position. The argument can be reinforced with the examples in (62), where *omen* appears together with a bare DP³³. As we can see, an initial *omen* is again ungrammatical. Moreover, we can replace *omen* with the semantically equivalent *dirudienez* “it seems”, which is not a clitic. As expected, we get the opposite result: *dirudienez* cannot interrupt an auxiliary cluster (63)³⁴, but it is not restricted to non-initial positions (64).

- 63) a. * Jonek liburua irakurri (*dirudienez) du (✓dirudienez)
 Jon book read AUX
Jon has read the book, it seems
 b. * Jonek ez (*dirudienez) du (✓dirudienez) liburua (✓dirudienez) irakurri
 Jon no AUX book read
Jon hasn't read the book, it seems

64) A: Zer irakurri du Jonek
 what read AUX Jon
What has Jon read?

- B: a. ✓ Liburua dirudienez
 book it seems
 b. ✓ Dirudienez liburua
 it seems book

In conclusion, we have established that *omen* is a clitic, which, in the same way as tensed forms, cannot appear in initial position. The lack of adjacency between the auxiliary and its “licenser” does not result in ungrammaticality because the intervener is another clitic, and it is a common phenomenon in many languages (such as Romance or Slavic) to have multiple clitics licensed by a single element.

Now, the question is, how do we derive the observed orders [Neg *omen* Aux] and [V *omen* Aux]? One option is that *omen* adjoins to TP, and then we either merge negation or move the verb, depending on the sentence. I don't think this is a workable hypothesis, though. To begin with, recall that *omen* takes scope over the whole clause. This is easier to appreciate in negative clauses, with the inverse scope reading of *omen* over negation:

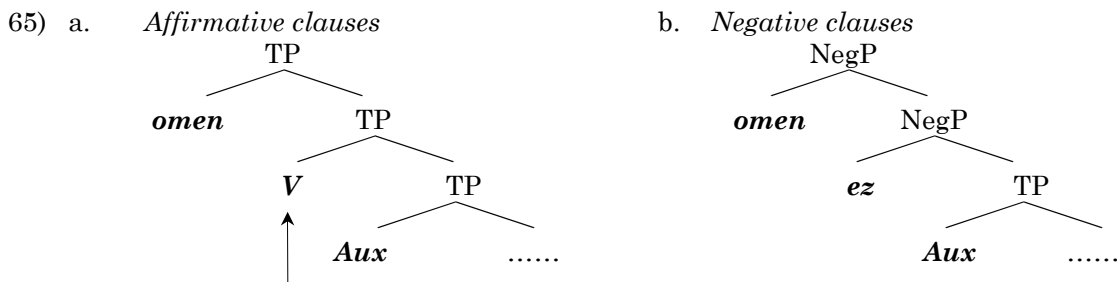
³³ It is not important here whether this is the result of *omen* adjoining to the DP, or of topicalisation plus ellipsis.

³⁴ For simplicity, not all possible positions for *dirudienez* are indicated here

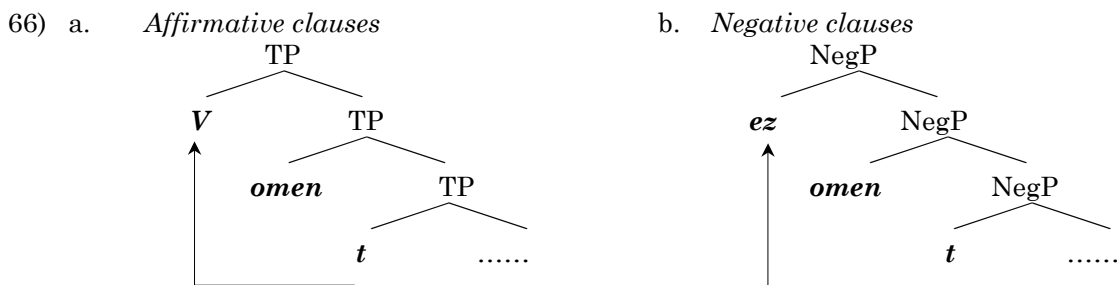
- 40) Jonek ez omen du liburua irakurri
 Jon no apparently AUX book read
 ✓ *It seems to me that it is not the case that Jon has read the book* [omen >> ez]
 * *It is not the case that it seems to me that Jon has read the book* [ez >> omen]

If the derivation took place as sketched in the paragraph above (first merge *omen*, then negation), the inverse scope reading would be impossible to get, at least on the assumption that scope is read off c-command relations. *Omen* would not c-command negation at any point, and consequently we would expect negation to take wide scope.

Instead, I want to propose the following alternative: once we get to the TP level, we merge negation, or move the verb, as usual. Afterwards, we merge *omen*. This gives us the following structures:



As is easy to see, these representations give us the correct scope relations, but the wrong word order. To derive the correct order, we need to move the verb in (65a) and negation in (65b) to the left of *omen*:



Obviously, these operations entail that (head) movement is freer than the standard theory assumes. In particular, it entails that there is no restriction to move a head to the immediately higher head position, neither to move it to a head position at all. As with verb fronting, these issues will be discussed in more detail in section 4.

4.2.4. A note on semantic inertness

While (66) gives us the correct word order but, without further qualifications, the wrong scope. That is, we have the inverse results as with (65). In order to solve this problem, I propose that the movements described in (66) are semantically vacuous –i.e., the verb and negation are interpreted in their original positions. I believe this is reasonable solution: fronting only takes place to satisfy the requirements of the clitic. The fronted element is not affected in any way. It simply moves to the first position to remove the clitic from that position, but this movement has no influence in its interpretation. Following Holmberg (2000), we may characterise this movement as affecting only the phonological matrix of the moved item, leaving its formal features intact.

This hypothesis gives us a good result, namely, that fronted elements are interpreted as though they had not been moved at all. For instance, in affirmative sentences, no special

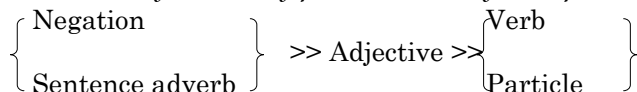
interpretation is attached to the verb by virtue of being moved to the front of the clause, neither if it undergoes a second movement to the left of *omen*. Also, it gives the correct scope relations for negative sentences with *omen*. Since negation is interpreted in its base position, which is by definition lower than *omen*, the inverse scope reading in (21) follows. Notice also the importance of base-generating negation in a high position, rather than around the VP area and then deriving its surface position through movement (cf. the analyses discussed in section 4.1.2). If that was the case, and negation raised from a low position to “license” the verb, we would expect it to be interpreted there too. However, as we saw in section 4.1.2, NPIs can be licensed in immediately post-auxiliary position. This means that negation must be interpreted at least at the TP level. This follows from the present analysis because, being base-generated above TP, it cannot be interpreted any lower.

- 49) a. ✓ *Jonek ez du ezer irakurri*
 Jon no AUX anything read
Jon hasn't read anything
- b. ✓ *Patronatuko agintariak ez omen zien ezer erantzuten*
 Corporation manager no apparently AUX anything answer
Apparently, the president of the corporation wasn't giving them any answers

4.2.5. Restrictions on fronting

There is still one pending issue we need to tackle before closing this section off. Earlier on, I implicitly introduced a hierarchy of the elements that can undergo fronting to “license” the auxiliary. Negation and the verb had preference over *wh*-phrases and focused constituents. However, this is not what we could expect in principle. If the only purpose of fronting is to prevent the auxiliary from appearing in the first position, there shouldn't be any restriction like that. At most, we could expect a relativised minimality effect, whereby fronting of *x* would be blocked if there is a *y* that is closer than to the auxiliary. Icelandic stylistic fronting is an example of this effect (Holmberg 2000, citing Maling 1980), where there is a hierarchy (67) regulating which elements may undergo fronting (68):

67) *Accessibility hierarchy for Icelandic stylistic fronting:*



- 68) a. Sá sem **skrifað** hefur (***sennilega**) *t* Þessa bók
 he that written has probably this book
He that has probably written the book
- b. Þeir töldu um hvað **haegt** hefði (***ekki**) verið *t* að gera
 they talked about what possible had not been to do
They talked about what had not been possible to do

In (68a), fronting of the verb across a sentence adverb is blocked. So is fronting of an adjective across negation (68b), both sentences obeying the hierarchy in (67). Holmberg argues that this hierarchy is actually what we expect if stylistic fronting is a rule attracting the constituent closest to the target position³⁵. However, in Basque, once we abstract away from negation blocking verb fronting (which we have argued is an effect of local economy, not of relativised minimality), verb fronting is not blocked by intervening material, such as adverbs:

³⁵ This is obviously a simplification of the general idea. For instance, Holmberg reports that DPs cannot undergo stylistic fronting that productively. See his article for details.

- 69) a. Jonek **seguruenez** liburua irakurri du
 Jon probably book read AUX
Jon has probably read the book
- b. Liburua ulertzea **zaila** izan da
 book understand difficult be AUX
Understanding the book has been difficult

Why should negation and the verb take preferences over other elements to appear to the left of the auxiliary? I will assume that negation takes always preference over all other (lower) material for the same reason as it does over the verb (e.g., derivational economy factors). But why isn't there a relativised minimality effects when the verb crosses higher elements, as happens in Icelandic? An interesting observation is that this restriction seems to hold only for the Southern dialects that I have been discussing here. In the dialects spoken in the Northern part of the Basque Country, a *wh-* word or a focused constituent can take the place of the verb³⁶:

- 70) a. ✓Zer du Jonek *t* irakurri?
 what AUX Jon read
What has Jon read?
- b. ✓LIBURUA du Jonek *t* irakurri
 book AUX Jon read
It is the book that Jon has read

In these examples, the *wh-* word and the focalised object, both of which are closer to the auxiliary than the verb, can undergo fronting. As a consequence, the verb stays in its base position. Thus, it seems as though Northern dialects are the “well-behaved” ones, meaning that whatever moves to the left of the auxiliary is the closest suitable licenser. Southern Basque, on the other hand, instantiates a restriction whereby the verb takes preference over other elements. The most straightforward way to state this restriction is to capitalise on the fact that the auxiliary and the verb belong to the same extended projection, in Grimshaw’s (1997) sense. In other words, in Southern Basque, negation is the first element to consider, because of the economy reasons discussed in section 4.1.1. Next, the restriction to the extended VP projection makes the verb the second alternative. In support of this hypothesis, consider the following paradigm, involving a modal verb:

- 71) a. ✓Jonek liburua irakurri nahi du
 Jon book read want AUX
Jon wants to read the book
- b. ✓Jonek liburua nahi du irakurri
 Jon book want AUX read
- c. * Jonek liburua irakurri du nahi
 Jon book read AUX want

In (71a) the participle-modal unit has moved to the left of the auxiliary, whereas in (71b), only the modal has moved, stranding the participle on the right edge of the clause. One way to accommodate these sentences is to say that the participle may optionally incorporate into the modal (I will ignore the reasons behind this optionality). Once this has happened, the [V Mod] complex must move as a unit to the left of the auxiliary, as in (71a)³⁷. On the other hand, if no incorporation takes place, only the modal moves to the left

³⁶ This dialects, unfortunately, are too understudied to offer a full discussion here.

³⁷ And even beyond. If the sentence contains *omen*, it can only appear between [V Mod] and the auxiliary, never between the participle and the modal. This supports the idea that [V Mod] is the result of incorporation:

- i) ✓ Jonek liburua irakurri nahi **omen** du
 Jon book read want apparently AUX
Apparently, Jon wants to read the book
- ii) * Jonek liburua irakurri **omen** nahi du

of the auxiliary, and the participle is left in place (71b). Interestingly, it is impossible to move the participle to the left of the auxiliary and leave the modal at the right, as in (71c). In the terms sketched above, this would correspond to a situation in which, first of all, the participle has not incorporated into the modal, and second, the participle has raised skipping over the modal. This is what we expect given the hypothesis in the paragraph above. Normally, Icelandic-type relativised minimality effects do not arise in Basque because Basque has a restriction on the extended projection of the verb. But, once this extended projection consists of more than one member, RM effects reappear: in (71c), movement of the participle is blocked because there is a closer element that can move, namely the modal.

Finally, if neither negation nor the verb are available (as in the case of synthetic verbs), we can use a *wh*- word or a focused constituent. Thus, the difference between the Northern and the Southern patterns can be reduced to a restriction giving preference to verb fronting, available in the latter dialects but inexistent in the former³⁸.

4.3 Interim conclusion

In section 1, we saw that an analysis of Basque verb placement in terms of incorporation is untenable, both on theoretical and empirical grounds. My aim in this second section has been to try and reanalyse the data without invoking incorporation. The underlying intuition is that tensed verbal forms are Wackernagelian clitics. Therefore, they are banned from appearing in clause initial position. To that end, something must be placed to its left. In negative sentences, this can be achieved by mere merger of negation, whereas in affirmative sentences, we have to move the verb from its base position. This movement operation is necessarily head-to-spec movement, since it cannot be the case that it is incorporation (as argued in section 1), neither remnant VP movement (see section 2.2.2). Moreover, we saw as well that both negation and the verb can undergo one further movement to the left of the SOA *omen*, which is also a clitic and is banned from appearing in the first position. These operations do not influence the semantic interpretation of the clause, since they are triggered by prosodic constraints extraneous to the moved items. Therefore, as proposed by Holmberg (2000) for Scandinavian stylistic fronting, they only affect the phonological matrix of the constituents. In the next section, I elaborate on the rudiments of a theory of movement that can accommodate these intuitions

5. The theory of movement

The main theoretical goal of this article is to argue for the existence of head movement to non-head positions. We have seen so far evidence in favour of this operation in a number of constructions, namely, participle fronting in Scandinavian, Slavic, and Germanic, Q-movement in Japanese, and, in more detail, in verb placement in Basque. Thus, empirically head-to-spec movement can be taken to be a reasonably well-motivated operation, and the expectation is that future research will uncover more instances of it³⁹. The purpose of this section is to explore how this operation interacts with the rest of the theory of grammar.

³⁸ Admittedly, though, this is a rather stipulatory restriction, and more research is needed to see whether it can be inferred from more basic considerations.

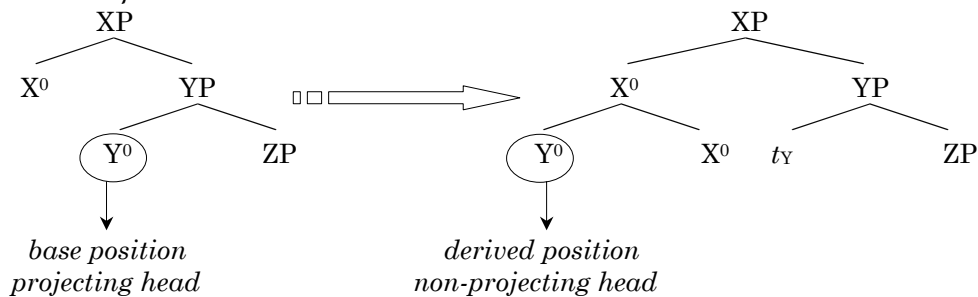
³⁹ See Toyoshima (2001) for a couple of possible cases of head-to-spec movement not included here.

5.1 Theoretical motivation

We saw at the beginning of the article that head-to-spec movement is something we can expect under a strict reading of BPS. In fact, head-to-spec movement already exists in this framework, although in a slightly concealed form. Chomsky (1995) argues that clitics have a dual status, as both minimal and maximal projections. They do not project any further, as heads do, but they can move in the same way as phrases. In this article, though, we have seen cases in which an unambiguously minimal projection moves into a non-head position. As we saw, this is something that falls out from the theory, and preventing it would require extra machinery. Chomsky (1995b:253) resorts to the Chain Uniformity Condition (CUC) to meet this end. In essence, the argument is that, if head-to-spec movement were possible, we would not get a uniform chain: the head would project up to a phrase in its base position, but not in its landing site. Hence, we would get a structure in violation of the CUC. This condition is one of the three that Chomsky gives as prerequisites for a well-formed chain (the other two being c-command and last resort). He states that this condition “seems natural”, although he gives no justification for it⁴⁰. The CUC, nonetheless, strikes me as opposing his general approach. Eleven pages earlier (Chomsky 1995b:242), he states that “there are no such entities as XP (X^{\max}) or X^{\min} in the structures formed by C_{HL} ”. Now, this is what we expect if merge (and move as copy plus merge) is the only operation responsible for structure building, and it cannot add any marks such as bar-levels to the structures it forms (the Inclusiveness Condition). In this state of affairs, as Chomsky points out, we can still distinguish X^0 s and XPs relationally (as fully projected vs. non-projecting items). The question, however, is whether this distinction is syntactically relevant. If the X^0 /XP split is not encoded in structure building (rather, it is inferred from a finished derivation), why should something like the CUC hold? If X-bar status is not encoded directly on constituents, it is not clear why it should matter at all for chain formation. We conclude, therefore, that the CUC introduces an inconsistency in the system.

Moreover, even if we found a way to maintain the CUC in order to block head-to-spec movement, we would have to relax it in order to allow for head-to-head movement. As is well-known, in cases of head-to-head movement, it is the targeted head that projects, giving rise to a CUC violation:

72) *Non-uniform chain in head-to-head movement*



We see, then, that the CUC is not a feasible means to block head-to-spec movement. In fact, given the evidence we have gone through in the previous sections, head-to-spec movement should not be blocked at all, and this is precisely a result we get for free if we adopt the BPS framework. The conclusion, then, is that head-to-spec movement both allowed for by our theory of syntax and realised in natural language.

⁴⁰ As a matter of fact, this is the one condition that cannot be easily justified. Last resort and c-command are actually general principles in the whole minimalist program, applying to wider domains than just movement (c-command to the extent that is reducible to the Extension Condition). However, the CUC’s only purpose seems to be to restrict the form of movement chains.

5.2 Head and phrase movement

Once we have motivated head-to-spec movement both empirically and theoretically, a question arises: how does it interact with the traditional operations of head and phrase movement? This section offers some speculative remarks on the way in which these concepts can be thought of in the present context.

The hypothesis I want to put forward is that head-to-spec and (traditional) phrase movement are essentially the same thing. That is, we select a constituent, make a copy of it, and merge the copy at the root of the tree we have built so far, checking that the result abides by the usual well-formedness conditions on movement, such as c-command, cyclicity, last resort, absence of interveners,... Given this reasoning, we expect that, in contexts when both heads and phrases can move to a specifier position, minimality effects will arise either way. This is what seems to happen in Scandinavian stylistic fronting (section 2.1), where the fronted element is the closest constituent to SpecTP, independently of whether it is a head or a phrase (see Holmberg 2000 for details). In other words, phrase movement is blocked by a closer head that is suitable for movement, and vice versa⁴¹.

Similarly, we also expect long distance head-to-spec movement to be available in the presence of bridge verbs. This prediction is exemplified in (73) for German. Note that this example cannot be analysed as remnant movement. To begin with, the object associated with the fronted verb is *niemanden* “nobody”, which we saw in section 2.2 cannot be scrambled out of VP. To confirm the point that it has not moved out of VP, notice that it follows the time adverb *gestern* “yesterday”, unlike scrambled objects, which usually precede it⁴²:

- 73) ✓ **Geküsst** glaube ich, [dass Peter gestern niemanden hat t]
 kissed think I that Peter yesterday nobody had
I think that Peter didn't kiss anybody yesterday

And, as expected, if we embed the launching site of the fronted verb inside an island (e.g., a relative clause, as below), the result is ungrammatical:

- 74) * **Geküsst** sah ich das Mädchen, [das gestern niemanden hat t]
 kissed saw I the girl who yesterday nobody kissed
I saw the girl who didn't kiss anybody yesterday

Hagstrom (1998:43) reports a similar paradigm involving Q movement in Japanese. He uses the emphatic *ittai* to mark the launching site of the Q morpheme as being inside the embedded clause. He reports that Q movement out of the embedded clause is grammatical if there is a bridge verb in the matrix clause, such as *omotta* “think” (75a). On the other hand, if the matrix verb is not a bridge verb, such as *sasayaita* “whisper”, the sentence is quite degraded. Finally, if the embedded clause is an island (such as a relative clause or an adjunct island), the sentence is totally out (76)⁴³:

- 75) a. ✓ Kimi-wa [Mary-ga **ittai nani-o** tabeta to] omotta **no**?
 you.TOP Mary.NOM EMPH what.ACC ate that thought Q
What on earth did you think that Mary ate?

⁴¹ Note that there is a prerequisite that both phrase and head-to-spec movement are possible. For instance, we do not see such intervention effects in Germanic “remnant” movement because this operation is related to topicalisation of the participle, therefore non-topic intervening elements do not count as interveners. The same may hold for Slavic, if Broekhuis & Migdalski’s (2003) suggestion is correct that participle fronting is a form of locative inversion involving agreement between the auxiliary and the participle. Intervening categories, not being part of the agreement relation, do not block the movement. Otherwise, one might resort to the “extended VP projection” account that we introduced for Basque in section 4.2.5

⁴² I am grateful to Martin Salzmann for constructing this example for me.

⁴³ The examples in (75) are taken from Hoji (1985), the one in (76) are from Pesetsky (1987).

- b. ?? Kimi-wa [Mary-ga **ittai nani-o** tabeta to] sasayaita **no**?
 you.TOP Mary.NOM EMPH what.ACC ate that whispered Q
What on earth did you whisper that Mary ate?

- 76) a. * Mary-wa [John-ni **ittai nani-o** ageta hito-ni] atta **no**?
 Mary.TOP John.DAT EMPH what.ACC gave man.DAT met Q
Mary met the man who gave what on earth to John?

- b. * Mary-wa [John-ni **ittai nani-o** yomu mae-ni] dekaketa **no**?
 Mary.TOP John.DAT EMPH what.ACC read before left Q
Mary left before John read what on earth?

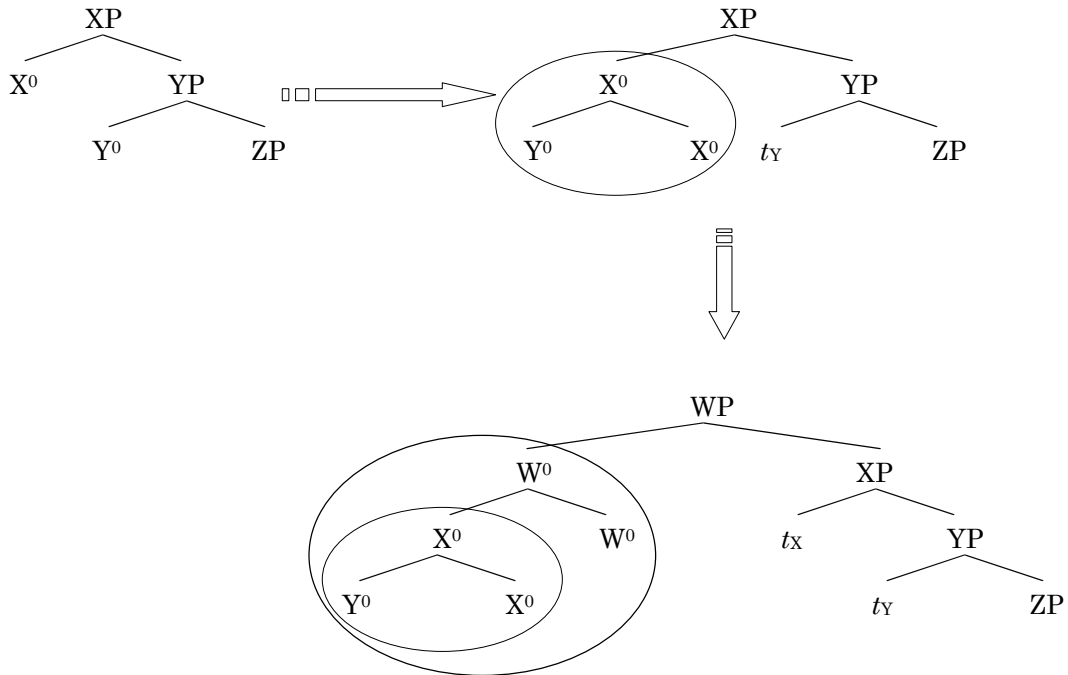
Thus, we see that head-to-spec movement obeys the same locality conditions as phrase movement, which suggests that both operations are actually instances of the same phenomenon. In other words, when an element moves into a spec position, it must obey a set of locality conditions, independently of whether the moved element is a head or a phrase.

5.3 HMC effects

After all we have said so far, the question that arises is how to account for the classical HMC phenomena. That is, it seems as though heads can move into both specifier positions (as we have seen in this article) and into head positions (as is usually assumed in the literature). The answer I want to sketch here is that head-to-head movement is not really movement in the traditional sense.

Let us begin by noticing a peculiarity of head-to-head movement, as opposed to movement to a specifier position. In the former case, the moved element and the target form a unit that cannot be disassembled by further operations. If either the moved element or the target needs to move further, the other must be carried along:

77) Head-to-head movement

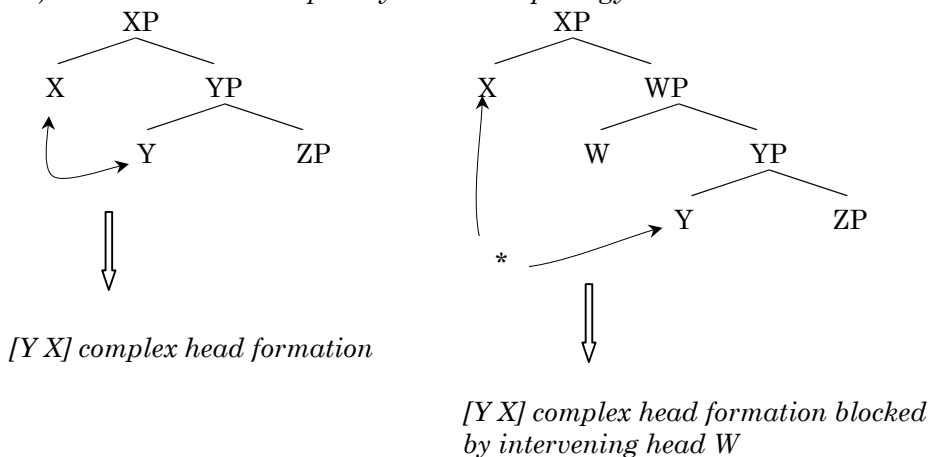


This, however, is not a property of movement into specifier positions. After movement into a specifier position, the moved element does not have to drag its target along if it

happens to move again. That is, head-to-head movement results in a morphological unit, whereas movement into spec positions does not. This implies that complex heads are not formed by syntax, but by morphology.

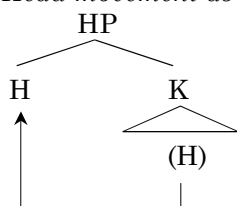
I know of two lines of analysis in the literature that implement this intuition. The first one has been developed by Brody (2000) and Abels (2001). The basic idea is that there is a post-syntactic morphological component, which can form a complex head on the basis of the features of a chain of adjacent heads⁴⁴. That is, in a tree like (78a), morphology can take both heads X and Y to form the complex head [Y X], which then gets spelt out in one of the two head positions (which one is determined parametrically). This gives us the effect of head-to-head incorporation⁴⁵. It is also postulated that intervening heads, as in (78b), block the process of complex head formation, thus accounting for the HMC effects.

78) *Head movement as post-syntactic morphology*



The second way to approach our intuition is the one initiated by Ackema *et al* (1993) and developed in the past few years by Koenenman (2000), Fanselow (2002), and Suranyi (2003). In this approach, complex heads are formed prior to the syntactic derivation. Once a complex head is introduced in the syntax, it can move out of the current phrase K and (contrary to what is usually assumed), project again (79). This is seen as a means for all the features included in the complex head to have their own projection. HMC effects are captured by assuming that no new head can be introduced in the derivation until the current head has projected all of its features:

79) *Head movement as self-projecting movement*



Both models take the process of complex head formation (and its associated effects) out of the syntactic derivation, so both are in principle equally suitable for our purposes. In fact, as Bury (2003) argues, it is not necessary to assume that these analyses are mutually incompatible. It might well be the case that both of them are actually employed, with different results in either case. I will simply assume that at least one of them is in the right

⁴⁴ Two heads *x* and *y* are adjacent if *x* is the head of the complement of *y*.

⁴⁵ And also the noun incorporation effects.

track, and leave for future research a more thorough investigation of how to implement HMC effects in the theory of movement I have developed through this paper⁴⁶.

References

To be compiled at some point

⁴⁶ Notice, though, that in the Brody/Abels approach, complex heads are formed post-syntactically. Since they are not present throughout the derivation, this makes this approach potentially incompatible with the theory of movement developed here. One possibility, though, could be to recast these ideas so that complex head formation can take place during the derivation, or before it. In principle, there is no reason why this should not be possible: Brody takes this to be a post-syntactic component essentially because of its general representational approach to syntax. Abels, although working on a derivational framework, offers no justification either.